Genetic and protein profiling in patients with oesophageal cancer

Published: 10-09-2008
Last updated: 19-03-2025

1) To identify a tumour genetic profile that is associated with early metastatic spread in patients presenting with oesophageal cancer and no evidence of distant metastasis at the time of diagnosis.2) To distinguish oesophageal cancer patients who...

Ethical review	Approved WMO
Status	Will not start
Health condition type	Malignant and unspecified neoplasms gastrointestinal NEC
Study type	Observational invasive

Summary

ID

NL-OMON32169

Source
ToetsingOnline

Brief title
PROFOC
(profiling of patients with oesophageal cancer)

Condition

- Malignant and unspecified neoplasms gastrointestinal NEC
- Gastrointestinal therapeutic procedures

Synonym
oesophageal cancer, oesophageal neoplasm

Research involving
Human

Sponsors and support

Primary sponsor: Nederlands Kanker Instituut
Source(s) of monetary or material Support: Fondswerving

Intervention

Keyword: gene expression profiling, neoadjuvant, oesophageal neoplasms, protein profiling

Outcome measures

Primary outcome

The following comparisons will be performed:

1) Patients who are diagnosed with metastatic disease within 1 year after diagnosis versus patients without metastatic disease within 1 year after diagnosis.

2) Patients in whom the tumour shows response to preoperative or definitive(chemo)radiotherapy versus patients in whom the tumour is unresponsive to this type of treatment.

Secondary outcome

Not applicable

Study description

Background summary

Improvement in oesophageal cancer treatment requires better selection of patients with an unfavourable prognosis from the outset (early metastatic potential) in whom intensive (local) therapy will only do harm. These patients should be discriminated from those patients who can be cured, preferably after individualized determination of the best treatment strategy.
Significant progress in the prediction and early identification of responders to chemoradiation will likely come from further insight into the molecular biology of oesophageal cancer. The use of biological markers may help to select patients with early metastatic potential, to earmark patients who will be unresponsive to (preoperative) (chemo)radiotherapy, and to individualize choices of chemotherapeutic regimens combined with radiation.

Gene expression analysis
With gene expression analysis a profile can be determined. This genetic profile

shows active genes inside the tumour, including those genes that are associated with tumoural behaviour such as response to radiation and chemosensitivity and the process of tumour dissemination.
It is very plausible that the genetic defects involved in oesophageal tumourigenesis can predict the outcome of disease, and therefore be of importance in directing individual treatment.

Protein expression analysis
Protein expression profiling is another means by which response to treatment and the process of tumour dissemination can be explored. If a pattern can be identified, it could be used for individualization of treatment for the patient with oesophageal cancer.

So far, both methods have been studied in patients with oesophageal cancer only on a very limited scale. Available data suggest that gene expression profiling may provide biomarkers for selection of therapy, but it is generally concluded that the results are preliminary.

Study objective

1) To identify a tumour genetic profile that is associated with early metastatic spread in patients presenting with oesophageal cancer and no evidence of distant metastasis at the time of diagnosis.

2) To distinguish oesophageal cancer patients who will respond to (preoperative) (chemo)radiotherapy from those who will not respond with the use of gene expression profiling.

3) To identify distinctive protein profiles in serum samples that can discriminate between subgroups of patients with oesophageal cancer (those with early metastatic spread versus those without, and responders versus non responders to chemoradiation).

4) To investigate whether serum protein profiling reflects tumour activity in patients who are treated for oesophageal cancer.

Study design

Inclusion criteria:
1) Patients presenting at the NKI-AvL or LUMC for the treatment of oesophageal cancer.
2) Planned gastroduodenoscopy (for diagnosis, feeding tube insertion, dilatation, etc.) or endoscopic ultrasonography (for staging) before the start of therapy.
3) No evidence of distant metastases at presentation (by endoscopic ultrasonography, computer tomography, and positron emission tomography)

4) Able and willing to undergo tissue sampling for tumour genetic analyses.
5) Age > 18 years.

Exclusion criteria:
1) Any condition that prohibits safe biopsy sampling (e.g. use of anticoagulants).
2) Incapacity or unwillingness of participant to give (written) informed consent.

Study burden and risks

Burden associated with participation:
- Extra biopsies (6) during planned gastroduodenoscopy/endoscopic ultrasonography before the start of therapy
- Five blood withdrawals (combined with planned blood withdrawals during therapy):
One sample will be drawn directly before gastroduodenoscopy/endosonography.
Additional blood samples will be drawn at different time points during the course of the therapy:
In patients undergoing (neoadjuvant) chemoradiotherapy, two weeks after the start of the treatment and at the end of the treatment.
And, in patients undergoing surgery, at postoperative day 1 and four weeks after the operation.
- To fill in a standardized EORTC questionnaire at five different time points.
- Individual duration of the study will be 4 months (from planned gastroduodenoscopy/endoscopic ultrasonography until four weeks after the operation)

Contacts

Public
Nederlands Kanker Instituut

Plesmanlaan 121
1066CX Amsterdam
NL
Scientific
Nederlands Kanker Instituut

Plesmanlaan 121
1066CX Amsterdam
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

1) Patients presenting at the NKI-AvL or LUMC for the treatment of oesophageal cancer.
2) Planned gastroduodenoscopy (for diagnosis, feeding tube insertion, dilatation, etc.) or endoscopic ultrasonography (for staging).
3) No evidence of distant metastases at presentation (by endoscopic ultrasonography, computer tomography, and positron emission tomography)
4) Able and willing to undergo tissue sampling for tumour genetic analyses.
5) Age > 18 years.

Exclusion criteria

1) Any condition that prohibits safe biopsy sampling (e.g. use of anticoagulants).
2) Incapacity or unwillingness to give written informed consent.

Study design

Design

Study type: Observational invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Will not start
Start date (anticipated):	01-08-2008
Enrollment:	80
Type:	Anticipated

Ethics review

Approved WMO

Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

ID: 19982
Source: Nationaal Trial Register
Title:

In other registers

Register	ID
CCMO	NL22892.031.08
OMON	NL-OMON19982